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(Signature of person mailing paper)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Docket No. YAMAP0575US **PATENT**

In re Appellant:

M. Shoji, et al.

Serial No: 09/089,901 Art Unit: 2651

Filed: June 3, 1998 Examiner: Aristotelis Psitos

For: OPTICAL DISK APPARATUS AND METHOD FOR SETTING CONTROL PARAMETERS

APPEAL BRIEF

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APPEAL BRIEF

Honorable Commissioner of
Patents and Trademarks
Washington, DC 20231

Dear Sir:

Appellants hereby submit this Appeal Brief, in triplicate, together with a check for the amount of the requisite fee of $310.00, as set forth in 37 C.F.R. § 1.17(c). Appellants' Notice of Appeal was received by the Patent Office on March 1, 2001. Accordingly, Appellants' Petition for Extension of Time of three months, together with a check for the requisite fee of $890.00, as set forth in 37 C.F.R. of § 1.17(a)(1) is included herewith.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Matsushita Electric Industrial Co., Ltd. 1006, Oaza Kadoma, Kadoma-shi, Osaka, 571-8501 Japan

II. RELATED APPEALS AND INTERFERENCES

Appellants are aware of no related appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-20 are presently pending in the Application. Claims 1-20 stand finally rejected, for which rejection Appellants bring the present appeal to the Board. The Appendix contains a copy of the claims involved in this appeal.

IV. STATUS OF AMENDMENT

A Proposed Amendment Under 37 C.F.R. 1.116(a) was filed on April 16, 2001, subsequent to Appellants' Notice of Appeal. This amendment was not entered. The amendment did not seek to amend the claims.

V. SUMMARY OF INVENTION

Claims 1 and 11 define an optical disk apparatus and method, respectively, in accordance with the present invention. Rather than simply the recording or reproduction of information on the optical disk, however, *the invention relates to the manner in which control parameters are set and changed by the apparatus in relation to the optical disk*.

For example, claim 1 recites a control parameter setting unit and a controller for setting and changing a control parameter (e.g., a focus position of a light beam, a tilt angle of the light beam, an intensity of the light beam, and an equalization characteristic of the light beam, as recited in claim 7). The control parameter setting unit and

controller of claim 1 may be distinguished over the control parameter setting units and controller of a conventional optical disk apparatus by the manner in which the control parameter setting unit and controller set and change the control parameter.

Specifically, claim 1 recites how the control parameter is changed as a result of a recording and reproduction unit recording a signal in both at least one continuous groove track and at least one continuous land track. *After* the signal is recorded in *both* the groove track and the land track, the recording and reproduction unit reproduces the signal from *both* the groove track and the land track. A quality of the signal thus recorded and reproduced is detected and the control parameter is determined based on the quality of the signal.

In a conventional optical disk apparatus, as described in the present application, a signal is recorded first in a land track and then reproduced from the land track. Thereafter, a signal is recorded in a groove track and then reproduced from the groove track. Then, based on the signals reproduced from the land track and the groove track, the control parameter is adjusted. (See, e.g., specification, Background of Invention at page 5, line 6, to page 6, line 9).

Thus, the present invention and the conventional approach, as well as some of the differences therebetween, can be summarized as follows:

Present Invention:		Conventional Approach:	
i)	record a signal in *both* a groove track and a land track;	i)	record a signal in a land track;
ii)	reproduce signal from *both* groove track and land track; and	ii)	reproduce signal from land track;
iii)	change control parameter based on quality of thus recorded and reproduced signal.	iii)	record a signal in a groove track;
		iv)	reproduce signal from groove track; and

	v)	change control parameter based on quality of thus recorded and reproduced signals.

As is discussed in the present application, there are a number of advantages with such a construction in accordance with the present invention. For example, it reduces the time required in order to perform the control parameter changing process. In particular, the specification describes a reduction in the number of rotations necessary to achieve the desired settings. (See, e.g., pp. 29-30).

In view of the above, Appellants believe the distinctions and advantages of the present invention over the cited references will become increasingly apparent.

VI. ISSUES ON APPEAL

The claims on appeal stand rejected under 35 U.S.C. §§ 103 and 112, first paragraph. The issues in this appeal are as follows.

A. THE UNOBVIOUSNESS OF CLAIMS 1, 2, 7, 9, 11, 12, 17 and 19 OVER JP 4-141827, IN VIEW OF MORIYA, ET AL. U.S. PATENT NO. 5,508,995.

B. THE UNOBVIOUSNESS OF CLAIMS 1, 2, 7, 9, 11, 12, 17 and 19 OVER JP 4-141827, IN VIEW OF MORIYA, ET AL. U.S. PATENT NO. 5,508,995 AND FURTHER IN VIEW OF NAKANE ET AL., ANY OF U.S. PATENT NOS. 6,091,669, 5,936,932 OR 5,946,285.

C. THE UNOBVIOUSNESS OF CLAIMS 3-6, 8, 10, 13-16, 18 AND 20 OVER JP 4-141827, IN VIEW OF MORIYA, ET AL., IN COMBINATION WITH THE ACKNOWLEDGED PRIOR ART, JOHANN, ET AL, U.S. PATENT NO. 5,341,360 AND PIETRZYKOSKI, ET AL., U.S. PATENT 5,812,506.

D. THE SUPPORT IN THE SPECIFICATION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH, FOR THE INVENTION CLAIMED IN CLAIMS 1-20.

VII. GROUPING OF CLAIMS

The rejection of each claim under 35 U.S.C. §103(a) is traversed separately. Independent claims 1 and 11, and the rejected claims dependent upon each of these independent claims, stand separately, although corresponding dependent claims are grouped together as follows. Each of claims 1 and 11 is believed separately patentable. Claim 2 stands separately from claim 1. Claim 12 stands separately from claim 11. Claims 7 and 17 and claims 9 and 19 are grouped together, and each group stands separately from the independent claims upon which they depend, with respect to the rejections over JP 4-141827 in view of Moriya et al. Thus, these dependent claims stand separately from the independent claims. Claims 3 and 13, claims 4 and 14, claims 5 and 15, claims 6 and 16, and claims 8, 10, 18 and 20 are grouped and argued together, respectively. Thus, the claims stand or fall separately with respect to the obviousness rejections.

The rejection of the claims under 35 U.S.C. § 112, first paragraph is traversed separately with respect to each claim. However, the claims stand or fall together with respect to this issue.

VIII. ARGUMENT

A. CLAIMS 1, 2, 7, 9, 11, 12, 17 AND 19 WOULD NOT HAVE BEEN OBVIOUS OVER JP 4-141827, IN VIEW OF MORIYA, ET AL. U.S. PATENT NO. 5,508,995.

Claims 1, 2, 7, 9, 11, 12, 17 and 19 stand finally rejected under 35 U.S.C. §103(a) based on acknowledged prior art *JP 4-141827* in view of *Moriya et al.* This rejection is respectfully traversed for at least the following reasons.

Regarding claims 1 and 11, the Examiner asserts that the recording technique described at Col. 12, lines 35-55 of *Moriya et al.* considered together with the

acknowledged prior art JP 4-141827 meets the limitations of the claims. Appellants respectfully disagree and traverse this rejection.

Distinctions over JP 4-141827:

Appellants respectfully submit that the present invention includes significant, patentably distinguishing features as compared to *JP 4-141827.* For example, the background section of the present application describes how the teaching of *JP 4-141827* may be applied to an optical disk having information recorded both on land tracks and groove tracks. However, it is pointed out that *the relevant control parameters are required to be obtained by repeating the recording and reproduction process for each land track and groove track separately.* (See, e.g., p. 3, l. 32; p. 5, ll. 1, 25 and 28.) Therefore, a longer time and more effort is required compared with the case of using only one of either the groove track or the land track. (See, e.g., specification, pp. 3-6). Moreover, since such a conventional apparatus must obtain optimum recording focus positions for a land track and a groove track separately, the total time required for achieving optimization is greater than that required by the present invention. (See, e.g., specification, pp. 29-30).

The present invention, on the other hand, may be distinguished over such conventional approach in the manner in which the invention records and reproduces the signal from the land and groove tracks. More specifically, the present invention as defined in presently pending claims 1 and 11 differs from such conventional approach in that *a signal is recorded in both the groove track and land track prior to being reproduced and evaluated for optimization purposes*. The present invention records a signal in *both* the groove track and land track, *and then* reproduces the signal from both the groove track and the land track in order to then perform the appropriate evaluation for purposes of optimization. Such approach is beneficial in that it reduces the time required in order to perform the process. For example, the specification describes a

reduction in the number of rotations necessary to achieve the desired settings. (See, e.g., pp. 29-30).

Claims 1 and 11 previously have been amended to highlight the foregoing distinction. For example, claims 1 and 11 refer to recording a signal in both at least one continuous groove track and at least one continuous land track, *and then after recording the signal in both the groove track and the land track*, reproducing the signal from both the groove track and the land track in order to then perform the appropriate evaluation for purposes of optimization. Such approach is beneficial in that it reduces the time required to perform the process. Neither *JP 4-141827* nor *Moriya et al.* teach or suggest performing the signal recording with respect to both a groove track and land track, and then after recording the signal in both the groove track and the land track reproducing the signal from both the groove track and the land track to set the control parameter. Rather, *JP 4-141827* and *Moriya et al.* teach the conventional approach of optimizing the parameters of the land track and groove track separately by first performing a recording and reproduction of signals from the land track, for example, and then performing a recording and reproduction of signals from the groove track.

Hence, *JP 4-141827* and *Moriya et al.* suffer from the aforementioned drawbacks associated with requiring a longer time to arrive at the appropriate control parameters.

For example, *Moriya et al.* teaches that a groove track and a land track can be recorded or reproduced continuously (see, e.g., Col. 12, ll. 53-55). This plainly refers to either a continuous recording operation or a continuous reproducing operation, and not to the presently claimed sequence. *Moriya et al.* does not teach or suggest the above-discussed features of claims 1 and 11 in relation to setting and changing a control parameter. Specifically, *Moriya et al.* does not teach or suggest i) recording a signal in *both* a groove track and a land track; ii) reproducing the signal from *both* the groove track and land track; and iii) changing the control parameter each time based on quality

of the thus recorded and reproduced signal. Thus, *Moriya et al.* suffers from the same deficiencies as *JP 4-141827*.

In particular, *JP 4-141827* also fails to teach or suggest setting and changing a control parameter as recited in claims 1 and 11. As is discussed above as the conventional approach (see Table), the background section of the present application describes how the teaching of *JP 4-141827* may be applied to an optical disk having information recorded both on land tracks and groove tracks. However, it is pointed out that *the relevant control parameters must be obtained by repeating the recording and reproduction process for each land track and groove track separately*. That is to say, the signal is first recorded in a groove track, for example, and then reproduced from the groove track. Thereafter, the signal is recorded in a land track and then reproduced from the land track. It is only after each of these recording and reproducing steps separately to the groove track and the land track, that a control parameter may be changed.

Therefore, a longer time and more effort is required compared with the case of using only one of either the groove track or the land track. (See, e.g., specification, pp. 3-6). Moreover, since such a conventional apparatus must obtain optimum recording focus positions for a land track and a groove track separately, the total time required for achieving optimization is greater than that required by the present invention. (See, e.g., specification, pp. 29-30).

The present invention, on the other hand, may be distinguished over such conventional approach in the manner in which the invention records and reproduces the signal from the land and groove tracks. More specifically, the present invention as defined in amended claims 1 and 11 differs from such conventional approach as noted above in that *a signal is recorded in both the groove track and land track prior to being reproduced and evaluated for optimization purposes*. The present invention records a signal in *both* the groove track and land track, *and then* reproduces the signal from both

the groove track and the land track in order to then perform the appropriate evaluation for purposes of optimization. Such approach is beneficial in that it reduces the time required in order to perform the process. For example, the specification describes a reduction in the number of rotations necessary to achieve the desired settings. (See, e.g., pp. 29-30).

Specifically, the paragraph bridging from page 29 to page 30 in the specification states the following:

> On the other hand, in a conventional apparatus, optimum recording focus positions are obtained for a land track and a groove track, separately, so that a time corresponding to 3 rotations in total is required for the land track (i.e., one rotation for recording (point 21 to point 22), one rotation for waiting for reproduction (point 23→ point 24 → point 25) and one rotation for reproduction (point 21 to point 22)). Furthermore, the same amount of time is required for the groove track. Thus, a time corresponding to 6 rotations in total is required.
>
> Assuming that the land track and the groove track are recorded at 4 kinds of recording focus positions so as to obtain an optimum recording focus position, a time corresponding to 20 (5 x 4) rotations is required in the present embodiment, whereas a time corresponding to 24 (6 x 4) rotations is required in the conventional apparatus. Thus, a waiting time for rotation is shortened in the present embodiment.

As shown by the foregoing disclosure, even if the prior art methods are carried out in a continuous fashion, more steps and therefore a longer time are required.

Neither *JP 4-141827* nor *Moriya et al.* teach or suggest performing the signal recording with respect to both a groove track and land track, and then after recording the signal in both the groove track and the land track reproducing the signal from the

groove track and the land track. Rather, *JP 4-141827* and *Moriya et al.* teach the conventional approach of optimizing the parameters of the land track and groove track separately by first performing a recording and reproduction of signals from the land track, for example, and then performing a recording and reproduction of signals from the groove track. Hence, *JP 4-141827* and *Moriya et al.* suffer from the aforementioned drawbacks associated with requiring a longer time to arrive at the appropriate control parameters.

Accordingly, claims 1 and 11 are considered to patentably distinguish over *JP 4-141827* and *Moriya et al.* as do claims 2, 7, 9, 12, 17 and 19 which depend therefrom. Reversal of the obviousness rejection over the asserted combination of references is respectfully requested.

With respect to claim 2, the Examiner merely asserted that the features thereof are "considered self evident". Such is an improper basis for rejection of Appellants' claim. Claim 2 is considered to patentably distinguish over the asserted combinations of references for the same reasons as does claim 1, and for the additional reason that the Examiner failed to point out where in the prior art the allegedly self-evident features are found.

With respect to claim 12, the Examiner has failed to provide *any* reason for the rejection of this claim. Accordingly, claim 12 is considered patentable over the prior art. Since claim 12 is similar to claim 2, in case the Examiner intended to include claim 12 with claim 2, the same response applies to claim 12 as set forth above with respect to claim 2.

With respect to claims 7 and 17, the Examiner merely asserted the interpretation that intensity is power. The Examiner provided no basis for this assertion, and failed to point out how this is disclosed in the references. The Examiner thereby failed to provide a proper basis for this rejection. Claims 7 and 17 are considered to patentably

groove track and the land track. Rather, *JP 4-141827* and *Moriya et al.* teach the conventional approach of optimizing the parameters of the land track and groove track separately by first performing a recording and reproduction of signals from the land track, for example, and then performing a recording and reproduction of signals from the groove track. Hence, *JP 4-141827* and *Moriya et al.* suffer from the aforementioned drawbacks associated with requiring a longer time to arrive at the appropriate control parameters.

Accordingly, claims 1 and 11 are considered to patentably distinguish over *JP 4-141827* and *Moriya et al.* as do claims 2, 7, 9, 12, 17 and 19 which depend therefrom. Reversal of the obviousness rejection over the asserted combination of references is respectfully requested.

With respect to claim 2, the Examiner merely asserted that the features thereof are "considered self evident". Such is an improper basis for rejection of Appellants' claim. Claim 2 is considered to patentably distinguish over the asserted combinations of references for the same reasons as does claim 1, and for the additional reason that the Examiner failed to point out where in the prior art the allegedly self-evident features are found.

With respect to claim 12, the Examiner has failed to provide *any* reason for the rejection of this claim. Accordingly, claim 12 is considered patentable over the prior art. Since claim 12 is similar to claim 2, in case the Examiner intended to include claim 12 with claim 2, the same response applies to claim 12 as set forth above with respect to claim 2.

With respect to claims 7 and 17, the Examiner merely asserted the interpretation that intensity is power. The Examiner provided no basis for this assertion, and failed to point out how this is disclosed in the references. The Examiner thereby failed to provide a proper basis for this rejection. Claims 7 and 17 are considered to patentably

distinguish over the asserted combinations of references for the same reasons as do claims 1 and 11, and for the additional reason that the Examiner failed to identify the basis for the interpretation.

With respect to claims 9 and 19, the Examiner merely asserted that the features of these claims are inherent in *Moriya et al.* and explicitly stated that no further analysis is made. This is an improper rejection. To establish inherency, the extrinsic evidence, i.e., the reference cited, "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Continental Can Co. v. Monsanto Co., 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." Id. at 1749. Claims 9 and 19 are considered to patentably distinguish over the asserted combinations of references for the same reasons as do claims 1 and 11, and for the reason that the Examiner failed to meet the legal requirements for an assertion of inherency. The features of claims 9 and 19, together with the features of the claims upon which they depend are respectfully submitted to patentably distinguish over the prior art.

Accordingly, Appellants respectfully request the Board to reverse the rejection of claims 1, 2, 7, 9, 11, 12 17 and 19 over JP 4-141827 in view of Moriya et al.

B. CLAIMS 1, 2, 7, 9, 11, 12, 17 AND 19 WOULD NOT HAVE BEEN OBVIOUS OVER JP 4-141827, IN VIEW OF MORIYA, ET AL. U.S. PATENT NO. 5,508,995, AND FURTHER IN VIEW OF NAKANE ET AL., ANY OF U.S. PATENT NOS. 6,091,669, 5,936,932 OR 5,946,285.

Claims 1, 2, 7, 9, 11, 12, 17 and 19 stand finally rejected under 35 U.S.C. §103(a) based on acknowledged prior art *JP 4-141827* in view of *Moriya et al.* and

further in view of *Nakane et al.*, any of U.S. Patent Nos. 6,091,669, 5,936,932 or 5,946,285. This rejection was not asserted until after Appellants' claims were amended, and appears to be based on the Examiner's position that the present claims or arguments somehow "are attempting to define is that know [*sic*] in the art as SS-L/G", stated at the bottom of page 4 in the Office action mailed September 15, 2000. This rejection is respectfully traversed for at least the same reasons as set forth in the foregoing section A., and in addition for the following reasons.

As stated in the discussion of the rejection under 35 U.S.C. §112, First Paragraph, in Section E, below, Appellants are not claiming or attempting to define what is known in the art as SS-L/G format (single spiral land/groove format). As noted above, in *Moriya et al.*, either the recording is continuous or the reproducing is continuous, but these are not the same as what is claimed in Appellants' claims. In *Moriya et al.*, the optimization is not continuous in the manner claimed.

The addition of the *Nakane et al.* references to the previously asserted rejection would not have rendered obvious Appellants' claimed invention. *Nakane et al.* disclose that SS-L/G format is known. *See, e.g.*, US 5,936,932, col. 3, ll. 49-55. The Examiner has not pointed out any other feature of *Nakane et al.* which is assertedly relevant to Appellants' claimed invention. None of the *Nakane et al.* references make up for the above-noted deficiencies of the asserted combination of *JP 4-141827* in view of *Moriya et al.*

Accordingly, claims 1 and 11 are considered to patentably distinguish over *JP 4-141827* and *Moriya et al.* as do claims 2, 7, 9, 12, 17 and 19 which depend therefrom. Claims 2, 7, 9, 12, 17 and 19 are considered to distinguish over this combination of references for the same reasons set forth above with respect to these claims. Reversal of the obviousness rejection over the asserted combination of references is respectfully requested.

C. CLAIMS 3-6, 8, 10, 13-16, 18 AND 20 OVER JP 4-141827, IN VIEW OF MORIYA, ET AL., IN COMBINATION WITH THE ACKNOWLEDGED PRIOR ART, JOHANN, ET AL, U.S. PATENT NO. 5,341,360 AND PIETRZYKOSKI, ET AL., U.S. PATENT 5,812,506.

Claims 3-6, 8, 10, 13-16, 18 and 20 are rejected under 35 U.S.C. §103(a) based on *JP 4-141827* and *Moriya et al.* in combination with the *acknowledged prior art*, *Johann et al.* and *Pietrzykoski et al.* Reversal of each of the respective rejections is respectfully requested for at least the following reasons.

Claims 3-6, 8, 10, 13-16, 18 and 20 each depend from amended claim 1 or 11 either directly or indirectly. Consequently, these claims patentably distinguish over the teachings of *JP 4-141827* and *Moriya et al.* for at least the same reasons stated above. That is to say, neither *JP 4-141827* nor *Moriya et al.* teach or suggest performing the signal recording with respect to both a groove track and land track, and then after recording the signal in both the groove track and the land track reproducing the signal from the groove track and the land track.

Furthermore, the *acknowledged prior art*, *Johann et al.* and *Pietrzykoski et al.*, and the *Nakane et al.* references, have not been shown to make up for such deficiencies. Accordingly, reversal of the rejection of these claims over the asserted combination of references is respectfully requested.

Specifically with respect to claims 3 and 13, the Examiner asserted that the features of these claims would have been obvious over the references cited against claims 1, 2, 11 and 12, and further in view of the *unspecified* "acknowledged prior art." The Examiner provided no further explanation of the rejection of these claims. Thus, like the rejections of other dependent claims, this rejection is improper. Claims 3 and 13 are considered to patentably distinguish over the asserted combinations of references for the same reasons as does claim 1. Since the Examiner has provided no other basis for rejecting these claims, the rejections should be reversed.

With respect to claims 4 and 14, the Examiner asserted that the features of these claims are rejected for the same reasons as applied to claims 3 and 13 above, and further in view of *Johann et al.* As noted, the rejections of claims 3 and 13 were improper, thus, the rejections of claims 4 and 14 are likewise improper. The Examiner asserted that *Johann et al.* disclose an "averaging" capability, which could be applied to the allegedly obvious "basic parameter setting/optimizing/establishing capability". The *Johann et al.* disclosure fails to remedy the shortcomings of the primary references, and therefore cannot render obvious claims 4 and 14. Thus, claims 4 and 14 are considered to patentably distinguish over the asserted combinations of references for the same reasons as do claims 1 and 11.

With respect to claims 5 and 15, the Examiner asserted that the features of these claims are rejected for the same reason as applied to claim 4 and further in view of the acknowledged prior art. These claims recite that the control parameter of the groove track and the land track are set separately. The Examiner provided no basis other than mentioning page 29, which in fact states that the optimum settings are obtained separately. However, the disclosure at page 29 states that the entire operation is separate, which is distinct from the invention claimed in claims 1 and 11. Thus, in addition to being improper as noted above with respect to claims 3, 4, 13 and 14, the rejection of claims 5 and 15 fails to show how all the elements of Appellants' claims 5 and 15 are disclosed in the prior art. Thus, claims 5 and 15 are considered to patentably distinguish over the asserted combinations of references for the same reasons as do claims 1 and 11, and for the foregoing reason.

With respect to claims 6 and 16, the Examiner asserted that the features of these claims are rejected for the same reasons as applied to claims 3 and 13 above, and further in view of the acknowledged prior art. These claims recite that the operations are performed at two positions apart from each other. The Examiner provided no basis

other than mentioning page 29, which in fact states that the optimum settings are obtained separately. However, the disclosure at page 29 states that the entire operation is separate, which is distinct from the invention claimed in claims 1 and 11. Thus, in addition to being improper as noted above with respect to claims 3-5 and 13-15, the rejection of claims 6 and 16 fails to show how all the elements of Appellants' claims 6 and 16 are disclosed in the prior art. Thus, claims 6 and 16 are considered to patentably distinguish over the asserted combinations of references for the same reasons as do claims 1 and 3, and claims 11 and 13, and for the foregoing reason.

With respect to claims 8, 10, 18 and 20, the Examiner asserted that the features of these claims are rejected for the same reasons applied to claims 1 and 11, and further in view of *Pietrzykoski et al.* The Examiner asserted that the ability to have a plurality of parameters optimized is considered merely a duplication of effort as taught by *Pietrzykoski et al.*, and that it would have been obvious to modify the basic parameter setting/optimizing/establishing capability with the additional capability of doing so for a plurality of parameters as done by *Pietrzykoski et al.* However, the Examiner failed to note that *Pietrzykoski et al.* does not remedy the shortcomings of the primary references with respect to the invention claimed in claims 1 and 11. Thus, claims 8, 10 18 and 20 are considered to patentably distinguish over the asserted combinations of references for the same reasons as do claims 1 and 11.

For the foregoing reasons, Appellants respectfully request reversal of the rejections of claims 3-6, 8, 10, 13-16, 18 and 20.

D. THE EXAMINER HAS FAILED TO MEET THE LEGAL REQUIREMENTS FOR A CASE OF *PRIMA FACIE* OBVIOUSNESS.

The conclusion that the claimed subject matter is *prima facie* obvious must be supported by evidence, as shown by some objective teaching in the prior art or that

knowledge generally available to one of ordinary skill in the art would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Lalu*, 223 USPQ 1257 (Fed. Cir. 1984); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 227 USPQ 657 (Fed. Cir. 1985), and *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 USPQ 929 (Fed. Cir. 1984).

The Federal Circuit reiterated and reemphasized the requirement for the Examiner to produce actual evidence of some suggestion or motivation to combine the features of the cited references so as to support the alleged obviousness of the claimed invention in at least two recent cases. For example, in *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999), the court stated:

> Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight. [Citations omitted.]
>
> We have noted that evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, although the suggestion more often comes from the teachings of the pertinent references. **The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular.** Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." [Citations omitted; emphasis added.]

In *Dembiczak*, the court reversed the Board's affirmance of the Examiner's rejection due to the failure to do any more than discuss the ways in which the prior art references

could be combined. *Id.* at 1618. The court stated, "[t]his reference-by-reference, limitation-by-limitation analysis fails to demonstrate how the [cited] references reach or suggest their combination with the conventional [art] to yield the claimed invention." *Id. See also, In re Kotzab*, 55 USPQ2d 1313, 1316-1317 (Fed. Cir. 2000) (citing *Dembiczak*, reversing the Board's affirmance of an obviousness rejection, and reiterating the importance of avoiding hindsight reconstruction of the Appellants' claims by requiring the clear and particular showing of a motivation to make the claimed combination).

Appellants respectfully point out, whether the combination of *JP 4-141827* and *Moriya et al.*, or the combination of *JP 4-141827* and *Moriya et al.* together with the additional references is considered, that none of the cited references contains any teaching or suggestion by which a person of ordinary skill in the art would know or would be motivated to select the particular features of Appellants' claimed invention from the various features of the cited references. The Examiner has failed to identify any basis which would be known to or which would motivate a person of ordinary skill in the art to make the asserted combination or modification of features, in order to reach Appellants' claimed invention. Absent any such teaching, suggestion or knowledge, selection of these features can only be the result of an improper hindsight reconstruction of Appellants' claimed invention, and the rejection of the claims based thereon should be reversed.

Furthermore, for all the reasons detailed in the foregoing arguments, even if it is considered (for the sake of argument) proper to combine the teachings of the cited references, the teachings of the cited references simply would not have led a person of ordinary skill in the art to select and combine the specifically claimed features of Appellants' claimed invention. While the elements of the claimed invention, e.g., recording and reproducing from each of the lands and grooves, may be present in the

prior art, none of the references contains any suggestion which would motivate a person of skill in the art to select and combine the presently claimed features as recited in Appellants' claims. Therefore, the references, in any combination, fail to render obvious Appellants' claimed invention, when viewed or considered as of the time the invention was made.

E. THE INVENTION OF CLAIMS 1-20 IS SUPPORTED BY THE SPECIFICATION AS FILED IN ACCORDANCE WITH 35 U.S.C. §112, FIRST PARAGRAPH.

Claims 1-20 stand rejected under 35 U.S.C. §112, first paragraph, as being non-enabled by the specification. This rejection is respectfully traversed for at least the following reasons.

Specifically, the Examiner indicated that the continuous recording/reproducing as now claimed is not adequately disclosed. Appellants are unsure of exactly what the Examiner means by "continuous recording/reproducing". Based on the Examiner's comments in the last paragraph of page 4 and the summary on page 6 of the Office Action, the Examiner appears to be interpreting Appellants' claims as simply trying to claim what is known in the art as SS-L/G.

However, it should be clear based on the foregoing explanations and arguments that claims 1 and 11 are directed to an apparatus and method for setting and changing a control parameter in relation to an optical disk. Appellants are by no means claiming an apparatus or method by which both recording and reproducing are performed continuously, as it appears ma be the Examiner's understanding. Nor, for that matter, are claims 1 and 11 simply directed to SS-L/G. Rather, claims 1 and 11 relate to the particular manner in which a control parameter is set and changed, as clearly set forth in the claims. While the present invention has application in SS-L/G, it is by no means inherent in SS-L/G.

Accordingly, reversal of the rejection of Appellants' claims 1-20 as lacking support is respectfully requested.

IX. CONCLUSION

For all these reasons, the rejection of Appellants' claims 1-20 under 35 U.S.C. §§ 103 and 112, First Paragraph, should be reversed because none of the references, alone or in combination, would have rendered obvious Appellants' claimed process at the time the invention was made, and because the presently claimed invention is fully supported by the specification as filed. Appellants respectfully request reversal of the Examiner's rejections under Sections 103 and 112 with respect to the patentability of Appellants' claimed invention.

The Office is authorized to charge any under payment, or to credit any overpayment, in connection with this Appeal to Deposit Acct. No. 18-0988.

Respectfully submitted,
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APPENDIX

CLAIMS ON APPEAL

1. (Amended) An optical disk apparatus performing either one of recording and reproduction of an optical disk in which groove-shaped groove tracks and land tracks present between the groove tracks are alternately connected to each other in a spiral shape, comprising:

a recording and reproduction unit for recording a signal in both at least one continuous groove track and at least one continuous land track, and after recording the signal in both the groove track and the land track, then reproducing the signal from both the groove track and the land track;

a detector for detecting a quality of the signal thus recorded and reproduced by the recording and reproduction unit;

a control parameter setting unit for setting a control parameter related to at least one of the recording and the reproduction of the optical disk; and

a controller for changing the control parameter set by the control parameter set by the control parameter setting unit, repeating the recording and reproduction performed by the recording and reproduction unit and detection performed by the detector every time the control parameter is changed, and determining the control parameter based on the quality of the signal detected by the detector.

2. An optical disk apparatus according to claim 1, wherein the controller obtains a control parameter common to the groove track and the land track.

3. An optical disk apparatus according to claim 1, wherein the controller obtains control parameters for the groove track and the land track, separately.

4. An optical disk apparatus according to claim 3, wherein the control parameter setting unit sets an average value of the control parameter of the groove track and the land track obtained by the controller.

5. An optical disk apparatus according to claim 3, wherein the control parameter setting unit sets the control parameter of the groove track and the land track obtained by the controller, separately.

6. An optical disk apparatus according to claim 3, wherein the recording and reproduction by the recording and reproduction unit, the detection by the detector, and the determination by the controller are performed at two positions apart from each other on the optical disk, and a control parameter corresponding to each of the positions is obtained in order to be set; and

when at least one of the recording and the reproduction is performed between the respective positions on the optical disk, a control parameter in accordance with the position at which at least one of the recording and the reproduction is performed is obtained in order to be set based on the control parameter corresponding to each of the positions.

7. An optical disk apparatus according to claim 1, wherein the control parameter is at least one of a focus position of a light beam radiated for at least one of the recording and the reproduction of the optical disk, a tilt angle of the light beam with respect to the optical disk, an intensity of the laser beam, and an equalizer characteristic of the laser beam.

8. An optical disk apparatus according to claim 1, wherein the controller sets a plurality of kinds of control parameters, separately, and repeats setting of each of the control parameters in accordance with a detection result of the detector.

9. An optical disk apparatus according to claim 1, wherein a number of sectors of the groove track to be recorded and reproduced by the recording and reproduction unit is equal to a number of sectors of the land track to be recorded and reproduced by the recording and reproduction unit.

10. An optical disk apparatus according to claim 1, wherein the detector detects at least one of a byte error rate of the signal recorded and reproduced by the recording and reproduction unit, a jitter of the signal, a bit error rate of the signal, a resolution of the signal, a symmetry of the signal, and a modulation of the signal.

11. (Amended) A method for setting a control parameter of an optical disk apparatus performing at least one of recording and reproduction of an optical disk in which groove-shaped groove tracks and land tracks present between the groove tracks are alternately connected to each other in a spiral shape, comprising:

a recording and reproduction step of recording a signal in both at least one continuous groove track and at least one continuous land track, and after recording the signal in both the groove track and the land track, then reproducing the signal from both the groove track and the land track;

a detection step of detecting a quality of the signal thus recorded and reproduced during the recording and reproduction step;

a control parameter setting step of setting a control parameter related to at least one of the recording and the reproduction of the optical disk; and

a control step of changing the control parameter set during the control parameter setting step, repeating the recording and reproduction performed during the recording and reproduction step and the detection performed during the detection step every time the control parameter is changed, and determining the control parameter based on the quality of the signal detected during the detection step.

12. A method for setting a control parameter of an optical disk apparatus according to claim 11, wherein a control parameter common to the groove track and the land track is obtained during the control step.

13. A method for setting a control parameter of an optical disk apparatus according to claim 11, wherein control parameters are obtained for the groove track and the land track, separately, during the control step.

14. A method for setting a control parameter of an optical disk apparatus according to claim 13, wherein an average value of the control parameter of the groove track and the land track obtained during the control step is set during the control parameter setting step.

15. A method for setting a control parameter of an optical disk apparatus according to claim 13, wherein the control parameter of the groove track and the land track obtained during the control step are separately set during the control parameter setting step.

16. A method for setting a control parameter of an optical disk apparatus according to claim 13, wherein the recording and reproduction during the recording and

reproduction step, the detection during the detection step, and the determination during the control step are performed at two positions apart from each other on the optical disk, and a control parameter corresponding to each of the positions is obtained in order to be set; and

when at least one of the recording and the reproduction is performed between the respective positions on the optical disk, a control parameter in accordance with the position at which at least one of the recording and the reproduction is performed is obtained in order to be set based on the control parameter corresponding to each of the positions.

17. A method for setting a control parameter of an optical disk apparatus according to claim 11, wherein the control parameter is at least one of a focus position of a light beam radiated for at least one of the recording and the reproduction of the optical disk, a tilt angle of the light beam with respect to the optical disk, an intensity of the laser beam, and an equalizer characteristic of the laser beam.

18. A method for setting a control parameter of an optical disk apparatus according to claim 11, wherein, during the control step, a plurality of kinds of control parameters are separately set, and setting of each of the control parameters is repeated in accordance with a detection result obtained during the detection step.

19. A method for setting a control parameter of an optical disk apparatus according to claim 11, wherein a number of sectors of the groove track to be recorded and reproduced during the recording and reproduction step is equal to a number of sectors of the land track to be recorded and reproduced during the recording and reproduction step.

20. A method for setting a control parameter of an optical disk apparatus according to claim 11, wherein at least one of a byte error rate of the signal recorded and reproduced during the recording and reproduction step, a jitter of the signal, a bit error rate of the signal, a resolution of the signal, a symmetry of the signal, and a modulation of the signal is detected during the detection step.